

**REMARKS**

Reconsideration and withdrawal of the rejections of the pending claims are respectfully requested in view of the amendments and remarks herein, which place the application in condition for allowance.

**I. STATUS OF CLAIMS AND FORMAL MATTERS**

Claims 1, 3-7, 10-14 and 17-18 are pending in this application after entry of the present amendment. Claims 1 and 4-6 have been amended solely to expedite prosecution of the pending claims and for clarity. Support for the amendments can be found throughout the specification and in the claims as originally filed. Claims 2, 15 and 16 have been cancelled. No new matter has been added.

The Examiner is thanked for indicating that claim 18 is allowable.

It is submitted that the claims, herewith and as originally presented, are patentably distinct over the prior art cited in the Office Action, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. It is submitted that the amendments of the claims, as presented herein, are not made for purposes of patentability within the meaning of 35 U.S.C. §§ 101, 102, 103 or 112. Rather, these amendments and additions are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

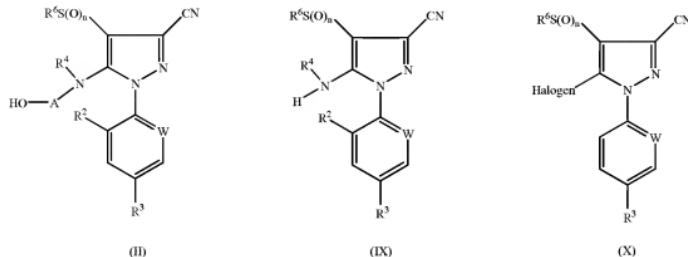
The issues raised by the Examiner in the Office Action are addressed below in the order they appear in the prior Action.

**II. THE REJECTIONS UNDER 35 U.S.C. §112**

Claims 1-6 and 10-17 remain rejected under 35 U.S.C. §112, first paragraph. The Office Action alleges that the specification is not enabling for the entire scope of compounds of formula (I). The Examiner further asserts that “[t]he availability of the starting material that is needed to prepare the invention as claimed is at issue here”. Applicants traverse the rejection.

Although Applicants do not agree with the Office Action, in the interest of expediting prosecution, claims 1, 4, 5, and 6 have been amended to redefine the scope of compounds of formula (I). The present specification describes the methods for the preparation of the compounds of general formula (I), i.e., “methods heretofore used or described in the chemical

literature" (paragraph 0125 of the specification as published). Furthermore, paragraphs 0127-0144 relate to the detailed synthetic methods for the preparation of compounds of formula (I) from common intermediates or starting materials of formulas (II), (IX), and (X).



As stated in paragraph 0145, compounds of formulas (III)-(XI) "are known or may be prepared by known methods". Furthermore, syntheses of the representative starting materials of formulas (IX) and (X) are exemplified on page 8, paragraphs 0154 and 0155 of the application as published. Paragraphs 0135-0138 relate to intermediates of formula (II), which may be prepared from compounds of formulas (IX) and (X) according to methods of the documents incorporated by reference in the present application or by adaptation of known methods described in the chemical literature. As such, provided the skill level of an ordinary skilled artisan is high and the level of predictability in the art is high, the preparation of the claimed compounds from the known intermediates does not require undue and unpredictable experimentation as it involves known and reliable synthetic procedures. "Limitations and examples in the specification do not generally limit what is covered by the claims". MPEP 2164.08.

The compounds where R<sup>1</sup> is CSNH<sub>2</sub> are derivatives of the compounds where R<sup>1</sup> is a cyano group. Compounds of formula (I) where the R<sup>1</sup> is CSNH<sub>2</sub> are prepared from the same intermediate of formula (II) using methods described in the specification and known in chemical literature. Compounds of formula (I) with various R<sup>4</sup> and R<sup>5</sup> groups can be also prepared from the same intermediates of formulas (X) and (II) using methods described in the specification and known in chemical literature. Contrary to the Examiner's assertion, compounds of formula (I) can be prepared from the known starting materials of formulas (II), (IX) and (X) using methods described in the specification and known to one of ordinary skill in the art. In particular, starting

materials of formulas (IX) and (X) are analogous to compounds exemplified in Intermediate Examples 1 and 2.

Therefore, one of ordinary skill in the art would be fully enabled to prepare the claimed 5-substituted oxyalkylamino-1-arylpyrazole derivatives based on the description and examples presented in the specification and synthetic methods well-known in the art.

Moreover, one of ordinary skill in the art would understand that the synthetic methods described in the specification for the preparation of claimed compounds of formula (I) are well-known and any additional experimentation required to prepare the compounds of formula (I) would be routine, and therefore permissible as the specification provides reasonable guidance with respect to the direction in which experimentation should proceed.

According to the Court of Appeals for the Federal Circuit in the case of *In re Wands*, 8 USPQ2d 1400 (Fed. Cir. 1988),

Enablement is not precluded by the necessity for some experimentation such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation. 'The key word is undue, not experimentation.' The determination of what constitutes undue experimentation in a given case requires the application of standard of reasonableness, having due regard for the nature of the invention and the state of the art. The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed ...  
[Citations omitted]. *Id.* at 1404.

Therefore, considerable experimentation is permissible if said experimentation is routine or if the specification provides reasonable guidance with respect to the direction in which experimentation should proceed.

The Examiner refers to the disclosures of Kando, et al., Phillips, et al., Jensen-Korte, et al., Manning, et al., and Wu and Plato, as allegedly demonstrating the variability "permitted" in R<sup>1</sup>-R<sup>6</sup>, but not disclosing "such a vast and broad scope as Applicants claim". The Examiner

further asserts that “[t]he generic teaching of the specification coupled by the dearth of guidance in the prior art are not considered sufficient to enable an art worker to make the entire scope of compounds of formula (I)”.

Applicants respectfully submit that known methods of introducing various substituents of compounds of formula (I) cannot be limited to the disclosures of Kando, et al., Phillips, et al., Jensen-Korte, et al., Manning, et al, and Wu and Plato, as one of ordinary skill in the art would be able to use or adopt a variety of the known synthetic methods described in the chemical literature to introduce the disclosed substituents R<sup>1</sup>-R<sup>6</sup>. Further, Applicants respectfully submit that “guidance in the prior art” should not be solely based on the teachings of Kando, et al., Phillips, et al., Jensen-Korte, et al., Manning, et al, and Wu and Plato, but should be considered based on the current state of organic chemistry field and all synthetic methodologies developed and known at the time the invention was made.

The amount of direction provided by the instant specification is high particularly in regard to the inclusion of working examples, and the quantity of experimentation needed to make or use the invention of the pending claims as amended based on the content of the disclosure is therefore low and, in any event, would not constitute undue experimentation. As such, the compounds of pending claims are enabled.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-6 and 10-17 under 35 U.S.C. §112, first paragraph, is respectfully requested.

Claim 7 also stands rejected under 35 U.S.C. §112, first paragraph. The Examiner asserts that the specification, while being enabling for a compound of formula (I), or composition thereof, wherein:

R<sup>1</sup> is -CN;

R<sup>2</sup> is a halogen;

R<sup>3</sup> is -CF<sub>3</sub>;

R<sup>4</sup> is -CH<sub>3</sub>;

R<sup>5</sup> is -CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>3</sub>, isopropyl, -CH<sub>2</sub>CH=CH<sub>2</sub>, phenyl, 4-trifluorophenyl, 4-methylphenyl, 4-nitrophenyl, 4-methoxyphenyl, 4-ethoxyphenyl, 2,6-difluorophenyl, 2-fluorophenyl, 4-

chlorophenyl, 1-methylene-2-fluorophenyl, 1-methylene-4-chlorophenyl, or 1-methylene-4-methylphenyl;

R<sup>6</sup> is -CF<sub>3</sub>,

A is -CH<sub>2</sub>CH<sub>2</sub>-;

W is CCl;

X is C=O or SO<sub>2</sub>; and

Y is a covalent bond, -O-, or -NH-,"

and a method of making and using said compounds and compositions, allegedly does not reasonably provide enablement for all other compounds encompassed by the claims. The Examiner states that claim 7 was inadvertently omitted from the statement of rejection in Office Action mailed on December 11, 2008, and therefore the rejections of claims 1-6 and 10-17 are hereby allegedly applied to claim 7. Applicants traverse the rejection.

Applicants respectfully submit that claim 7 is dependent from independent claim 1 discussed above and is therefore believed patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested. Accordingly, reconsideration and withdrawal of the rejection of claim 7 under 35 U.S.C. §112, first paragraphs is respectfully requested.

### **III. THE 35 U.S.C. §103 REJECTIONS**

Claims 10, 11, 13, and 14 remain rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kando, *et. al.* (U.S. Patent No. 6,316,477) in view of Phillips, *et al.* (European Patent No. 0 500 209, 1997), Jensen-Korte, *et al.* (U.S. Patent No. 4,971,989), Manning, *et al.* (International Application WO98/28279), Wu and Pilato (U.S. Patent No. 5,691,333), and King (Medicinal Chemistry; Principles and Practice, 1994). Applicants traverse this rejection.

The present invention discloses novel 5-substituted-oxyalkylamino-1-arylpypyrazole pesticides which may be used at a lower dose than the existing pesticides (paragraph 0006), which are substantially non-emetic (paragraph 0007) and which are safer to the user and the environment (paragraph 0008).

The Office Action alleges that “each of the applied references, except King, disclose 5-substituted oxyalkylaminopyrazole compounds as pesticides, that can be effective against insect pests”.

Applicants respectfully submit that claims 10, 11, 13, and 14 relate to the methods of controlling pests using novel compounds of the pending claims as amended. These method claims are not obvious in view of cited references as none of the documents, alone or in combination, teaches or suggests that the compounds of formula (I) containing a particular chemical modification at C-5. The compounds recited in the claims as amended are neither described specifically or generically by any reference cited by the Examiner. Furthermore, none of the references provides any motivation to produce the claimed compounds.

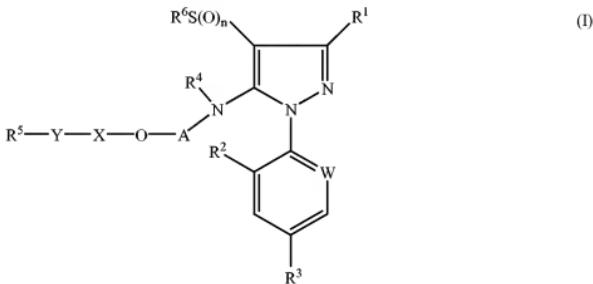
Applicants respectfully submit that it is well accepted that the biologically activity of compounds is not generally predictable. There are many examples in the art, where small changes in substituents of molecules can lead to significantly different steric and electronic properties which may have a significant impact on the activity of the compounds. Therefore, the methods of using such compounds are not obvious in view of references relating to the methods of using structurally different materials. The activity of the presently claimed compounds with a novel C-5 moiety, cannot be predicted based on the teachings of cited references as they do not teach or suggest the disclosed electronically and sterically demanding modification, that significantly improves the pesticidal activity of compounds of formula (I) compared to the activity of the compounds described in the cited references.

Some of the objects of the present invention are to provide new pesticides which may be used in lower dose than existing pesticides, which are safer to the user and the environment, which may be applied to animals in oral form, provide high level of pest control for a longer time period and consequently require less frequent dosing and which are substantially non-emetic. . The presently claimed compounds address a high demand for novel compounds which are advantageous over the known compounds and satisfy the objects of the present invention.

In view of the foregoing, it would not have been obvious to one of ordinary skill in the art, at the time of the instant invention to arrive at the instant method for controlling pests with the instant 1-arylpypyrazoles based on the teachings of Kando, et al., Phillips, et al., Jensen-Korte, et al., Manning, et al, and Wu and Plato with a reasonable expectation of success. One of ordinary skill in the art at the time of the instant invention would not expect that the compounds

recited in the pending claims could be used for controlling pests at a locus in a lower dose than existing pesticides, that they are safer to the user and the environment, that they may be applied to animals in oral form providing high level of pest control for a longer time period and consequently requiring less frequent dosing, and that they are substantially non-emetic based on the cited references.

Applicants would like to clarify that the sentence on page 13, paragraph 3, lines 8-10 of the previous reply filed April 2, 2009, as referred to by the Examiner in Office Action at 4, refers solely to the claimed compounds of formula (I) and not to **all** 5-substituted-oxyalkylamino-pyrazole compounds. Paragraph 3 relates only to the following class of compounds:



where C-5 substitution is explicitly specified and which does not encompass all compounds comprising substituted oxyamino group at C-5 position of pyrazole.

The Examiner further states that “[t]he 5-substituted oxyalkylaminopyrazoles of the prior art have the same utility (e.g. pesticides) as the instantly claimed compounds, thus it would be *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use the claimed compounds to control pests”.

None of the references cited by the Examiner, alone or in combination, teach, suggest or motivate one of ordinary skill in the art to use the compounds of pending claims for the control of pests in or on an animal. Therefore, the cited reference does not render the pending claims *prima facie* obvious.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are respectfully requested.

**CONCLUSION**

Reconsideration and withdrawal of the claim rejections communicated in the Final Office Action dated October 5, 2009 are respectfully requested in view of the remarks and amendments herein, and issuance of a Notice of Allowance is respectfully requested.

If the Examiner believes any informalities remain in the application, which may be corrected by Examiner's amendment, or whether any other issues can be resolved by telephone interview, a telephone call with the undersigned is courteously solicited.

Respectfully submitted,  
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